

REMARKS/ARGUMENTS

The Office Action dated June 20, 2007 has been carefully considered. Claims 2-12, 16-18, and 20-25 are pending in the present application with claims 2, 20 and 23 being in independent form. A copy of the claims indicating the present status of each is included for the convenience of the Examiner.

Claims 2, 3 and 20-25 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,915,889, also to Kress et al. (hereinafter "Kress '889") in view of U.S. Patent No. 4,971,483 to Kress et al. (hereinafter "Kress '483"). Reconsideration of this rejection is respectfully requested.

The Examiner argues that Kress '889 substantially discloses all of the features of claim 2 of the present application, for example. The Examiner concedes that Kress '889 does not disclose a tool with "two supporting regions in the tool for supporting the cutter tip, the supporting regions having support surfaces against which the cutter tip rests, and the support surfaces of the supporting region are oriented with respect to each other at an angle, the supporting regions also being so oriented that a line bisecting the angle between the support surfaces runs essentially perpendicular to an active one of the cutting edges," "a clamping claw which holds the cutter tip to the supporting regions, the clamping claw comprising a clamping lip; wherein the clamping lip comes to rest on a front side of the cutter tip and engages the clamping notch, and wherein the tool and cutter tip thereof are both shaped to be operable for metal cutting machining of valve seats in cylinder heads of internal combustion engines," as is required by claim 2 of the present application. The Examiner argues, however, that Kress '483 discloses these features and that it would have been obvious to one of ordinary skill in the art to modify Kress '889 to include these features. Applicants respectfully disagree.

As was noted in Applicants' previous response, Kress '483 relates to a specialized tool utilized for making holes. While Kress '483 may disclose a cutter plate that is a symmetrical polygon, the cutter plate of Kress et al. has a main cutter HS and an auxiliary cutter NS which have a rounded shape as illustrated in Fig. 3 of Kress '483. Kress '483 does not disclose two support regions or surfaces for supporting the cutter tip being oriented relative to each other at an

angle such that a line bisecting the angle runs essentially perpendicular to an active cutting edge. The Examiner refers to the annotated Fig. 6 at page 3 of the final office Action in support of his argument that Kress '483 shows this feature. However, as an initial matter, the line that the Examiner draws on Fig. 6 that allegedly bisects the angle between the supporting edges in Fig. 6 does not appear to actually bisect this angle. Further, even if it did, this line is also not perpendicular to a cutting edge of the tool. As is noted above, the cutting edge of Kress et al. has a rounded shape and includes elements HS and NS as illustrated in Fig. 3, for example. It is clear that the line drawn by the Examiner does not extend perpendicularly from any portion of any of the rounded cutting edges of Kress '483 much less an active cutting edge.

The Examiner also argues that Kress '889 discloses that the cutting edge is "formed in a straight line between two adjacent corners of the cutter tip," as required by claim 2 of the present application, for example. However, this is incorrect. In Kress '889, the primary and secondary cutting edges are at the rounded corner regions of the cutting tip, similar to the cutter tip of Kress '483. See Kress '889, Abstract. Thus, the cutting edge in both Kress '889 and Kress '483 is not formed in a straight line at all, but is rounded.

It is well establish that in order to establish a *prima facie* case of obviousness, "the prior art reference (or references when combined) must teach or suggest all the claim limitations." See M.P.E.P. §2143. As discussed above both Kress '889 and Kress '483 fail to disclose "two supporting regions in the tool for supporting the cutter tip, the supporting regions having support surfaces against which the cutter tip rests, and the support surfaces of the supporting region are oriented with respect to each other at an angle, the supporting regions also being so oriented that a line bisecting the angle between the support surfaces runs essentially perpendicular to an active one of the cutting edges," as is required by claim 2, for example of the present application. Further, neither of the references relied on by the Examiner show or suggest a cutting edge "formed in a straight line between two adjacent corners of the cutter tip." Indeed, none of the references cited by the Examiner, either alone or in combination, cited by the Examiner show or suggest the features of claim 2 described above.

Accordingly, it is respectfully submitted that claim 2, and the claims depending therefrom, are patentable over the cited art for at least the reasons described above.

Similarly, claim 20 of the present application relates to a method for metal cutting machining of a surface in an opening comprising operating a tool to metal cut machine a surface in an opening where the tool includes “a cutter tip having at least one geometrically defined cutting edge, the cutting edge formed as a straight line between two adjacent corners of the cutter tip,” and “two supporting regions ... the supporting regions also being so oriented that a line bisecting the angle between the support surfaces runs essentially perpendicular to an active one of the cutting edges.” Thus, it is believed that claim 20, and the claims depending therefrom are also patentable over the cited art for reasons at least similar to those described above with reference to claim 2.

Independent claim 23, and the claims depending therefrom, are believed to be patentable over the cited art for at least similar reasons as well.

Claims 4, 5 and 7 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kress ‘889 in view of Kress ‘483 and further in view of previously cited Breuning ‘482. Reconsideration of this rejection is respectfully requested.

Claims 4-5 and 7 depend from claim 2, either directly or indirectly. As noted above, claim 2 is believed to be patentable over the cited art for at least the reasons described above. Further, it is respectfully submitted that claim 2 is patentable over the combination of Kress ‘889 , Kress ‘483 and Breuning, since none of these references, either alone or in combination, show or suggest the patentable features of claim 2 described above.

Accordingly, it is respectfully submitted that claims 4, 5 and 7 are patentable over the cited art for at least the reasons described above.

Claim 6 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kress ‘889 in view of Kress ‘483 and further in view of Breuning ‘842 and Erickson ‘650. Reconsideration of this rejection is respectfully requested.

Claim 6 depends indirectly from claim 2. As noted above, claim 2 is believed to be patentable over the cited art for at least the reasons described above. Further, it is respectfully submitted that claim 2 is patentable over the combination of Kress ‘889 , Kress ‘483 and Breuning ‘842 and Erickson ‘650 since none of these references, either alone or in combination, show or suggest the patentable features of claim 2 described above.

Claim 8 has also been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kress '889 in view of Kress '483 and further in view of Breuning '842 and previously cited Satran '724. Reconsideration of this rejection is respectfully requested.

Claim 8 depends indirectly from independent claim 2. As noted above, claim 2 is believed to be patentable over the cited art for at least the reasons described above. Further, it is respectfully submitted that claim 2 is patentable over the combination of Kress '483, Kress '889, Breuning '842 and Satran '724, since none of these references, either alone or in combination, show or suggest the patentable features of claim 2 described above.

Accordingly, it is respectfully submitted that claim 8 is patentable over the cited art for at least the reasons described above.

Claim 9 has also been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kress '889 in view of Kress '483 and further in view of Breuning '842. Reconsideration of this rejection is respectfully requested.

Claim 9 depends from independent claim 2. As noted above, claim 2 is believed to be patentable over the cited art for at least the reasons described above. Further, it is respectfully submitted that claim 2 is patentable over the combination of Kress '483, Kress '889 and Breuning '842, since none of these references, either alone or in combination, show or suggest the patentable features of claim 2 described above.

Accordingly, it is respectfully submitted that claim 9 is patentable over the cited art for at least the reasons described above.

Claims 10-12 have also been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kress '889 and Kress '483 further in view of Royal '198. Reconsideration of this rejection is respectfully requested.

Claims 10-12 depend from independent claim 2. As noted above, claim 2 is believed to be patentable over the cited art for at least the reasons described above. Further, it is respectfully submitted that claim 2 is patentable over the combination of Kress '483, Kress '889 and Royal '198, since none of these references, either alone or in combination, show or suggest the patentable features of claim 2 described above.

Accordingly, it is respectfully submitted that claims 10-12 are patentable over the cited art for at least the reasons described above.

Claims 16-17 have also been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kress '889, Kress '483 and further in view of Link '155. Reconsideration of this rejection is respectfully requested.

Claims 16-17 depends from independent claim 2. As noted above, claim 2 is believed to be patentable over the cited art for at least the reasons described above. Further, it is respectfully submitted that claim 2 is patentable over the combination of Kress '483 , Kress '889 and Link '155, since none of these references, either alone or in combination, show or suggest the patentable features of claim 2 described above.

Accordingly, it is respectfully submitted that claims 16-17 are patentable over the cited art for at least the reasons described above.

Claim 18 has also been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kress '889 in view of Kress '483 and further in view of Hellstrom '081. Reconsideration of this rejection is respectfully requested.

Claim 18 depends from independent claim 2. As noted above, claim 2 is believed to be patentable over the cited art for at least the reasons described above. Further, it is respectfully submitted that claim 2 is patentable over the combination of Kress '889, Kress '483 and Hellstrom '081, since none of these references, either alone or in combination, show or suggest the patentable features of claim 2 described above.

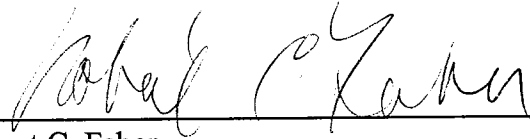
Accordingly, it is respectfully submitted that claim 18 is patentable over the cited art for at least the reasons described above.

In light of the remarks and amendments made herein, it is respectfully submitted that claims 2-12, 16-18 and 20-25 of the present application are patentable over the cited art and are in condition for allowance.

Reconsideration of the present application is respectfully requested.

THIS CORRESPONDENCE IS BEING
SUBMITTED ELECTRONICALLY
THROUGH THE UNITED STATES
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Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert C. Faber", is written over a horizontal line.

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